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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,075

11/22/2006

Oleg Kolosov

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SENNIGER POWERS LLP (SMX)
100 NORTH BROADWAY
17TH FLOOR
ST. LOUIS, MO 63102

EXAMINER

FITZGERALD, JOHN P

ART UNIT

PAPER NUMBER

2856

NOTIFICATION DATE

DELIVERY MODE

02/20/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary	Application No. 10/550,075	Applicant(s) KOLOSOV ET AL.	
	Examiner JOHN FITZGERALD	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/9/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II in the reply filed on 09 January 2009 is acknowledged. Claims 20-29 are currently pending.

Drawing Objections

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "Faraday cage" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Namely, in line 17 of claim 20, the recitation of "optional" in regards to electrical communication of the secondary component with the ASIC renders the claim indefinite because the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. *Ex Parte Hasche*, 86 USPQ 481 (BdPatApp&Int 1950). It is unclear if the secondary component is, or is not, in communication with the ASIC.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 20-23, 26, 27, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,126,311 to Schuh. Schuh discloses a package (30) (Figs. 2 and 4) for protecting a sensor having all of the recited elements including a flexural resonator (cantilever beam, as

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recited in claim 34) on a platform (32), the resonator having an exposed sensing surface displacing fluid in contact therewith to determine characteristics of the fluid, an ASIC (20) for providing stimulus to the resonator and receiving a response signal from the resonator, a secondary component (14) being positioned independently from the ASIC on the platform, being a temperature sensor (as recited in claim 23) being in optional electrical communication with the ASIC via conducting paths (34) (as recited in claim 20); further comprising a housing (43) having a plurality of walls (see Fig. 4) that substantially surround the resonator while maintaining exposure of the sensing surface to the fluid (as recited in claims 21 and 22) (col. 9, lines 25-32); the flexural resonator is capable of operating between temperature ranges recited in claims 26 and 27 (see Fig. 4); and adapted for use in heavy machinery (col. 1, lines 9-12) (as recited in claim 35).

6. Claims 20, 23 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,269,686 to Hahn et al. Hahn et al. disclose a package (Fig. 2) for protecting a sensor having all of the recited elements including a flexural resonator (cantilever beam, as recited in claim 34) on a platform (10, 12), the resonator having an exposed sensing surface displacing fluid in contact therewith to determine characteristics of the fluid, an ASIC (17) for providing stimulus to the resonator and receiving a response signal from the resonator, a secondary component (16) being positioned independently from the ASIC on the platform, being a temperature sensor (as recited in claim 23) being in optional electrical communication with the ASIC (as recited in claim 20).

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 24, 25, 28-33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,126,311 to Schuh as applied to claim 20 above, and further in view of US 6,082,894 to Batko et al. Schuh discloses the claimed invention having all of the elements stated previously. Schuh does not expressly disclose a protective coating/layer covering, partially or completely, the flexural resonator and the platform, as well any circuitry or secondary components (as recited in claims 24 and 25); the specific dimensional aspects recited in claims 28-33 or the employment of a Faraday cage (as recited in claim 36). As to claims 24 and 25, Batko et al. disclose a sensor package having circuitry and electrical components covered by a coating/layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a coating/layer on any portion of a sensor's electrical circuitry and/or components to provide electrical and thermal insulation as well as provide the coated components protecting from moisture (Batko et al., see claim 11). As to claims 28-33, there would have been an obvious matter of design choice to alter the general dimensions of the sensor package, as so desired by one of ordinary skill in the art based on application and location of the package, choice of circuitry, and choice of sensitivity requirements, since applicant has not disclosed that the claimed dimensions solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any desired dimensional size.

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choice by one of ordinary skill in the art. Lastly, specifically regarding claim 36, the employment of a Faraday cage, the Examiner takes Official Notice that Faraday cages/shields are employed in combination with sensors and/or circuitry to protect them from stray electrical fields and noise that might adversely affect the circuit and/or sensor operation. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the package any desired shape or size, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

9. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,126,311 to Schuh as applied to claim 20 above, and further in view of US 6,336,353 to Matsiev et al. Matsiev et al. Schuh discloses the claimed invention having all of the elements stated previously. Schuh does not expressly disclose a tuning fork employed as the flexural resonator, or the adaptation of the package for use in an engine, transmission, heating and cooling system, etc. or adaptation for use in lubricants etc., as recited in claims 38-39. Matsiev et al. disclose a package for a sensor having a tuning fork resonator (see Fig. 2) that can be adapted for use to monitor properties of liquids flowing through a gas or oil pipeline (i.e. monitor the properties of gas and oil) or detect impurities in water. It would have been obvious to employ the tuning fork resonator disclosed by Matsiev et al., along with the taught applications, thus meeting the limitations of employing the package in the environments and devices recited in claims 37 and 38, or for adaptation in any desired environment or machine/device by one of ordinary skill in the art. Furthermore, it should be noted that functional recitation(s) using the words “for” and “adapted to” have been given little patentable weight because they fail to add any structural

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limitations and thereby regarded as intended use language. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. *In re Finstewalder*, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) (“The manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself.”); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). When interpreting functional language, if the prior art is capable of performing the claimed function—even if not directly disclosed—it anticipates. *In re Schreiber*, 128 F.3d 1473, 1478, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997); *In re Sinex*, 309 F.2d 488, 135 USPQ 302 (CCPA 1962). See also MPEP § 2114, 2115.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is invited to review PTO form 892 accompanying this Office Action listing Prior Art relevant to the instant invention cited by the Examiner.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

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Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Fitzgerald/
Examiner, Art Unit 2856
2/17/09